

IN THE SPECIFICATION:

Please amend the paragraph starting at page 1, line 9 as follows.

--A cartridge removably mountable in the main assembly of an electrophotographic image forming apparatus has been widely known (for example, Japanese Laid-open Patent Application 2000-221854). Here, an electrophotographic image forming apparatus ~~means~~ is an apparatus for forming an image on recording medium with the use of an electrophotographic image forming method. As examples of an electrophotographic image forming apparatus, there are electrophotographic copying machines, electrophotographic printers (laser beam printers, LED printers, etc.), ~~facsimile~~ facsimile machines, word processors, etc.--

Please amend the paragraph starting at page 1, line 21 as follows.

--A cartridge ~~means~~ is a cartridge having a minimum of a storage portion for storing developer used by a developing means. There is a cartridge system in which a cartridge is removably mounted in the main assembly of an electrophotographic image forming apparatus. It has been in use in recent years.--

Please amend the paragraph starting at page 2, line 1 as follows.

--~~A~~ The cartridge system substantially ~~improved~~ improves the operability of an electrophotographic image forming apparatus ~~in operability~~. In particular, it made it possible for a user to maintain by himself the components of an electrophotographic image forming apparatus, which contribute to the image formation process. Thus, a cartridge system has come to be widely used in the field of an image forming apparatus.--

Please amend the paragraph starting at page 2, line 9 as follows.

--Some ~~of the~~ image forming apparatus components ~~which~~ that directly contribute to an image formation process ~~are~~ have longer in service life ~~than the~~ lives than others. Therefore, such a cartridge system has been realized that the components with a shorter service life are placed in one type of a cartridge, and the components with a longer service life are placed in another type of cartridge. For example, a development cartridge (development unit) in which a developer storage portion and a developing means are integrally disposed in a cartridge, a drum cartridge (drum unit) in which an electrophotographic photoconductive member (photoconductive drum), a charging means, and a cleaning means, are integrally disposed in a cartridge, and the like cartridges, are currently in use.--

Please amend the paragraph starting at page 4, line 9 as follows.

--The primary object of the present invention is to provide a cartridge, the sealing tape of which is easily removably before it is used for the very first time, and an electrophotographic image forming apparatus in which ~~said~~ the cartridge is removably mountable.--

Please amend the paragraph starting at page 4, line 15 as follows.

--Another object of the present invention is to provide a cartridge which does not have the problem that the developer therein leaks due to an accidental removal of its sealing tape, and an electrophotographic image forming apparatus in which ~~said~~ the cartridge is removably mountable.--

Please amend the paragraph starting at page 5, line 4 as follows.

--Another object of the present invention is to provide a cartridge which is removably mountable in the main assembly of an electrophotographic image forming apparatus, and comprises: a developer storage portion for storing developer; a developer outlet through which the developer in the developer storage portion is supplied to a developing means for developing an electrostatic latent image formed on an electrophotographic photoconductive member; a removable sealing tape for sealing the developer outlet; a covering member, which is capable of taking the open position in which it exposes the developer outlet, and the closed position in which it seals the developer outlet, and covers the sealing tape, and to which one end of the sealing tape is fixed; and ~~the~~ a covering member retaining portion for retaining the covering member in the closed position; wherein the covering member is disengaged from the covering member retaining portion by the engagement of the covering member with the main assembly of the image forming apparatus, which occurs during the initial stage of the insertion of the cartridge into the main assembly of the image forming apparatus, and the sealing tape is removed, exposing thereby the opening of the developer outlet, by the movement of the covering member from the closed position to the opening position, which occurs after the initial stage of the insertion of the cartridge into the apparatus main assembly.--

Please amend the paragraph starting at page 6, line 6 as follows.

--Another object of the present invention is to provide an electrophotographic image forming apparatus in which a cartridge is removably mountable, and which is for forming an image on recording medium, comprising: (i) a mounting means for removably mounting a

cartridge comprising: a developer storage portion for storing developer; a developer outlet through which the developer in the developer storage portion is supplied to a developing means for developing an electrostatic latent image formed on an electrophotographic photoconductive member; a removable sealing tape for sealing the developer outlet; a covering member which is capable of taking the open position in which it exposes the developer outlet, and the closed position in which it seals the developer outlet, and covers the sealing tape, and to which one end of the sealing tape is fixed; and ~~the~~ a covering member retaining portion for retaining the covering member in the closed position; and (ii) a conveying means for conveying recording medium; wherein the covering member of the cartridge is disengaged from the covering member retaining portion by the engagement of the covering member with the main assembly of the image forming apparatus, which occurs during the initial stage of the insertion of the cartridge into the main assembly of the image forming apparatus, and the sealing tape is removed, exposing thereby the opening of the developer outlet, by the movement of the covering member from the closed position to the opening position, which occurs after the initial stage of the insertion of the cartridge into the apparatus main assembly.--

Please amend the paragraph starting at page 8, line 19 as follows.

--~~FIG. 8 is a drawing~~ Figures 8(a) and 8(b) are drawings for showing the movements of the outlet cover during the insertion of the toner supply container into the main assembly of an image forming apparatus.--

Please amend the paragraph starting at page 10, line 7 as follows.

--In the following descriptions of the present invention, the lengthwise direction means is a direction parallel to the axial direction of an electrophotographic photoconductive drum (which hereinafter will be referred to as photoconductive drum 2). Further, with reference to the direction in which a cartridge is inserted into an electrophotographic image forming apparatus, the side toward which a cartridge is inserted will be referred to as the back side, and the side toward which a cartridge is extracted (upstream side with reference to cartridge insertion direction) will be referred to as the front side. Further, the top or bottom side of a cartridge means is the top or bottom side of a cartridge properly disposed in the main assembly of an electrophotographic image forming apparatus.--

Please amend the paragraph starting at page 11, line 5 as follows.

--The image forming portion of this color laser beam printer in this embodiment employs four process cartridges 1 (1Y, 1M, 1C, and 1K corresponding to yellow, magenta, cyan, and black color components, respectively), each of which has a photoconductive drum 2 as an image bearing member. The image forming portion also has four exposing means (laser beam optical scanning system) [[51]] (51Y, 51M, 51C, and 51K), which are disposed in parallel and are aligned in the horizontal direction. The four exposing means [[1]] are located above the process cartridges 1 (1Y, 1M, 1C, and 1K), being roughly vertically aligned one for one with the four process cartridges 1.--

Please amend the paragraph starting at page 11, line 18 as follows.

--Disposed below the above described image forming portion is a feeding means for feeding a recording medium 52 into the main assembly, an intermediary transfer belt 54a onto which a toner image formed on the photoconductive drum 2 is transferred, and a secondary transfer roller 54d for transferring the toner images on the transfer belt ~~[[4a]]~~ 54a, onto the recording medium 52 ~~on the intermediary transfer belt 54a.~~--

Please amend the paragraph starting at page 12, line 20 as follows.

--The feeding portion is a portion for conveying the recording medium 52 to the image forming portion. It essentially comprises: a feeding cassette 53a which holds a plurality of recording ~~mediums~~ media 52; a feed roller 53b; a pair of retard rollers 53c for preventing two or more recording ~~mediums~~ media 52 from being fed at the same time; a guide 53d; and a pair of registration rollers 53g.--

Please amend the paragraph starting at page 13, line 1 as follows.

--The feeding roller 53b is rotationally driven in synchronism with an image forming operation, taking the recording ~~mediums~~ media 52, virtually one by one, out of the feeding cassette 53a and feeding them into the apparatus main assembly. As the recording ~~mediums~~ media 52 are fed into the apparatus main assembly, they are prevented by the retard rollers 53c from being fed at the same time. Then, the recording ~~mediums~~ media 52 are conveyed to the registration rollers 53g, by way of conveyance rollers 53e and 53f, while being guided by the conveyance guide 53d.

Please amend the paragraph starting at page 13, line 27 as follows.

--A process cartridge ~~means~~ is a cartridge in which a charging means, and a developing ~~meaning~~ means or cleaning means, are integrally disposed along with an electrophotographic photoconductive drum, and which is removably mountable in the main assembly of an electrophotographic image forming apparatus, or a cartridge in which at least one means among a charging means, a developing means, and a cleaning means, is integrally disposed along with an electrophotographic photoconductive drum, and which is removably mountable in the main assembly of an electrophotographic image forming apparatus. It also ~~means~~ is a cartridge in which a minimum of a developing means is integrally disposed along with an electrophotographic photoconductive drum, and which is removably mountable in the main assembly of an electrophotographic image forming apparatus.--

Please amend the paragraph starting at page 15, line 18 as follows.

--The photoconductive drum 2 in this embodiment is an organic photoconductive member, the inherent polarity of which is negative. More specifically, it comprises a hollow aluminum cylinder, as a base member [[2h]], with a diameter of approximately 30 mm, a layer of an ordinary photoconductive substance coated on the peripheral surface of the base member [[2h]], and a charge injection layer as an outermost layer coated on the photoconductive layer. It is rotationally driven at a predetermined process speed, which in this embodiment is approximately 117 mm/sec.--

Please amend the paragraph starting at page 16, line 6 as follows.

--Referring to FIG. 4, the photoconductive drum 2 is provided with a drum flange 2b, which is solidly attached to the back end (right end in FIG. 4) of the base drum [[2h]] of the photoconductive drum 2 in terms of the lengthwise direction of the photoconductive drum 2, and a drum flange 2d, which is solidly attached to the front end (left end in FIG. 4) of the base drum [[2h]], from which the photoconductive drum 2 is not driven. The photoconductive drum 2 is also provided with a drum shaft 2a, which penetrates the centers of the drum flanges 2b and 2d. The drum shaft 2a is connected to the flange 2d so that it rotates with the flange 2d, that is, the flange on the side from which the photoconductive drum 2 is not driven, which hereinafter will be referred to as non-driven flange 2d. The base drum [[2h]], drum shaft 2a, drum flange 2b, and non-driven flange 2d are rotated together. In other words, the photoconductive drum 2 is rotated about the axis of the drum shaft 2a.--

Please amend the paragraph starting at page 23, line 5 as follows.

--Thus, as the spot of light oscillates, the peripheral surface of the photoconductive drum 2 is exposed in the primary scanning direction, and as the photoconductive drum 2 is rotated, it is exposed in the secondary scanning direction. As a result, numerous points on the peripheral surface of the photoconductive drum 2 are exposed or remain unexposed in such a manner that the distribution of the exposed and unexposed points reflects the image formation signal sequence. In other words, the points (exposed points) with the reduced potential level, and the points (unexposed points) with the normal potential level, are created, the contrast among which generates an electrostatic latent image in accordance with the image formation information.



Please amend the paragraph starting at page 29, line 8 as follows.

--As the toner is consumed by the development of an electrostatic latent image, the toner content of the developer decreases. In this embodiment, a sensor 4g for detecting the toner content is disposed in the adjacencies of the peripheral surface of a developer stirring screw ~~4cB~~ 4eB, as shown in FIG. 2. As it is detected by the sensor 4g that the toner content of the developer has reduced below a predetermined level, a command for supplying the developer storage portion 4h of the developing apparatus 4 with the toner from the toner supply container 5 is issued to initiate a toner supplying operation, which maintains the toner content of the developer in the developing apparatus at a predetermined level.--

Please amend the paragraph starting at page 30, line 13 as follows.

--Referring to FIG. 5, the screw 5a and stirring shaft 5c are rotatably supported by bearings 5d, by their lengthwise ends. The screw 5a is provided with a driving coupling (female coupling) 5e, which is attached to the back end (right end in FIG. 5) of the screw 5a, and the stirring shaft 5a is also provided with a driving coupling (female coupling) 5e, which is attached to the back end (right end in FIG. 5). The driving couplings (female couplings) 5e receive the driving force transmitted through the driving couplings (male couplings) ~~62d~~ 62b, one for one, of the image forming apparatus main assembly 100, being thereby rotationally driven. The screw 5a comprises two pieces of spiral ribs located on one side of the toner outlet 5f and the other, and twisted in the opposite direction. The screw 5a is rotated in the predetermined direction by the rotation of the driving coupling 62b. As a result, the toner is conveyed toward the toner outlet 5f,

and free falls through the hole 5f5 of the toner outlet 5f into the process cartridge 1; in other words, the process cartridge 1 is supplied with the toner.--

Please amend the paragraph starting at page 31, line 8 as follows.

--The peripheral edge, that is, the outermost edge of each section of the stirring plate 5b, in terms of the rotational radius of the developer sending member 5b, is angled relative to the stirring shaft 5c. Thus, as each section of the stirring plate 5b rubs against the internal surface of the toner supply container 5, its peripheral edge portion is angled at certain degrees relative to its base portion. More specifically, the peripheral edge portion of each section of the stirring plate 5b is spirally twisted. Thus, as the stirring shaft [[5c]] 5b is rotated, the toner in the toner supply container 5 comes into contact with the spirally twisted edge portions of the stirring plate 5c, being thereby conveyed in the lengthwise direction of the stirring shaft 5c.--

Please amend the paragraph starting at page 31, line 24 as follows.

--Not only can the toner supply container 5 in this embodiment supply toner to a process cartridge, or a development cartridge, which employs a two-component developing method, but also to a process cartridge or a development cartridge, which employs a single-component developing method. Further, the powder to be stored in the toner supply container does not need to be limited to toner. For example, it may be the so-called developer, that is, a mixture of toner and magnetic carrier, ~~which is needless to say~~--

Please amend the paragraph starting at page 34, line 13 as follows.

--During the transfer process, the recording medium 52 is conveyed leftward ~~[[of]]~~ in FIG. 1 at a predetermined velocity, while remaining sandwiched between the secondary transfer roller 54d and intermediary transfer belt 54a, to a fixing device 56 which carries out the next process.--

Please amend the paragraph starting at page 36, line 20 as follows.

--Next, referring to Figures 2-5, the procedure for mounting the process cartridge 1 and toner supply container 5 into the image forming apparatus main assembly 100 will be described. Referring to FIG. 3, which is a schematic external perspective view of the image forming apparatus main assembly 100, the image forming apparatus main assembly 100 is provided with a front door 58, which is located in the front panel of the image forming apparatus main assembly 100 and can be freely opened or closed. As an operator opens the front door ~~[[27]]~~ 58 frontward, the openings through which the process cartridges 1Y-1K, and toner supply containers 5Y-5K, are inserted, are exposed.--

Please amend the paragraph starting at page 40, line 1 as follows.

--When the toner supply container 5 is mounted into the apparatus main assembly 100 in which the process cartridge is present, or when the process cartridge 1 is mounted into the apparatus main assembly 100 in which the toner supply container 5 is present, they are connected to each other by the connective portion, that is, the bottom end portion of the retaining member 5f2 of the toner supply container ~~5f2~~ 5, at the completion of the mounting of the toner supply

container 5 or the process cartridge. As a result, the toner discharged through the outlet 5f of the toner supply container 5 is supplied to the process cartridge 1.--

Please amend the paragraph starting at page 42, line 6 as follows.

--Prior to the mounting of the toner supply container into the apparatus main assembly 100, the outlet cover 5f 5f1 is in the first position in which it covers the outlet 5f.--

Please amend the paragraph starting at page 43, line 7 as follows.

--~~FIG. 8 is a drawing~~ Figures 8(a) and 8(b) are drawings for describing in detail the movement of the outlet cover 5f1. In this drawing, the position of outlet cover 5f1 at the beginning of the mounting of the toner supply container 5 into the apparatus main assembly 100, and the position of the outlet cover 5f1 at the end thereof, are shown by the top and bottom sides, respectively, of the drawings. FIG. 9 is an enlarged view of the outlet portion 5f at the beginning of the mounting. In the drawing, the right halves of the toner outlet cover 5f1, the retaining member 5f2, and the toner outlet shutter 5f3, as seen from the trailing side thereof, in terms of the toner supply cartridge insertion direction, have been removed for the ease of visual confirmation.--

Please amend the paragraph starting at page 43, line 27 as follows.

--Referring to ~~FIG. 8~~ Figures 8(a) and 8(b), prior to the beginning of the mounting of the toner supply container 5 into the apparatus main assembly 100, the hole 5f5 has been sealed with the tape 5f4. However, as the toner supply container 5 is inserted into the apparatus main

assembly 100, the outlet cover 5f1 is moved relative to the main assembly of the toner supply container 5, while dragging the tape 5f4 fixed to the outlet cover 5f1 by one end. Therefore, by the time the mounting of the toner supply container 5 into the apparatus main assembly 100 ends, the hole 5f5 will have been completely exposed.--

Please amend the paragraph starting at page 44, line 21 as follows.

--It must be assured that the outlet cover 5f1 will not dislodge during the period from the completion of the manufacture of the toner supply container 5 until a user actually mounts the toner supply container 5 into the apparatus main assembly 100. However, the toner supply container 5 is subjected to various shocks during the period from the completion of the manufacture of the toner supply container 5 until a user uses the toner supply container 5 for the very first time, during the shipment of the toner supply container 5, or during the like period. Thus, there is a concern that unless the outlet cover 5f1 is secured with some kind of means so that it will not easily move, the tape 5f4 will be peeled by the movement of the outlet cover 5f1, allowing thereby the developer ~~from leaking~~ to leak.--

Please amend the paragraph starting at page 52, line 21 as follows.

--More specifically, as the outlet cover 5f1 is pushed by the contact points 5f1c, a reactive force is generated at each of the retentive portions. Thus, it is reasonable to think that as long as the requirements for preventing the sum of the reactive forces generated at the retentive portions, from generating moment in the outlet cover 5f1, is satisfied, the outlet cover 5f1 will not chatter

or rattle. In this embodiment, the toner supply container 5 is structured so that all of these requirements are satisfied for all practical purposes.--